



Stainless 316L

Achieve the best part quality and mechanical properties
with ready-to-run materials

MECHANICAL PROPERTIES

	VALUE	
	C	≤0.030%
Cr	16.5-18.5%	
Fe	Balance	
Mn	≤2.00%	
Mo	2.00-2.50%	
N	≤0.11%	
Ni	10.00-13.00%	
P	≤0.045%	
S	≤0.030%	
Si	≤1.00%	

OTHER

SPECIFICATIONS	TEST METHOD	VALUE
Young's Modulus	ASTM E8M	190 GPa
Yield Strength (Rp 0.2 %)	ASTM E8M	330 MPa ± 50 MPa ⁶ 470 MPa ± 70 MPa ⁴
Ultimate Tensile Strength	ASTM E8M	550 MPa ± 50 MPa ⁶ 600 MPa ± 100 MPa ⁴
Elongation at Break	ASTM E8M	50% ± 10 % ⁶ 40% ± 20 % ⁴
Micro Vickers Hardness		210 - 215 Hv
Thermal Conductivity ¹	at 50 °C	at 20°C: 15 W/m.K at 100°C: 16.3 W/m.K at 500°C: 21.5 W/m.K
Coeff. of Thermal Expansion ¹	20 - 100 °C	0 - 100 °C: 16.4 x 10-6/°C
	20 - 300 °C	0 - 300 °C: 18.6 x 10-6/°C



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SPECIFICATIONS	TEST METHOD	VALUE
Specific Heat Capacity ¹	0-100°C	500J/kg.K
	20-200°C	520 J/kg.K
	at 300°C	550 J/kg.K
	at 500°C	590 J/kg.K
	at 700°C	630 J/kg.K
Melting Point ¹		1375 - 1400 °C
Magnetic Permeability ¹		1.008
Electrical Resistivity		740 nΩ.m
Relative Density		Approx. 100%
Absolute Density ¹		7.92 g/cm ³
Typical Surface Roughness ² Ra		4 - 6.5 μm
Typical Surface Roughness ² Ry		25 - 50 μm

